

Curriculum Vitae

William Carroll Campbell

September, 2008

PERSONAL

Address: Carroll Campbell, M/S R/E/ET1, 325 Broadway Street, Boulder, CO 80305-3337
Telephone: (303) 497-6829
E-mail: Carroll.Campbell@noaa.gov

SUMMARY OF EDUCATION

Louisiana Tech University (1966 - 1970)

B.S. (1970) Electrical Engineering, *magna cum laude*

University of Colorado (1970 - 1971)

M.S. (1971) Electrical Engineering

AREAS OF EXPERIENCE

Digital circuit design, analog circuit design, computer interface design, C/C++ programming, assembly language programming, diagnostic programming, computer systems, DSP computers, VME systems, pulsed Doppler radar, FM-CW Doppler radar, signal processing of radar data, CODAR, ruggedized equipment design, electromagnetic testing and compatibility, project management and mechanical design. Most of my work has involved applying computer technology, digital technology and signal processing to extend the capabilities of research radars.

SUMMARY OF EXPERIENCE

Date: 02/98 to present

Employer: National Oceanic and Atmospheric Administration

Position: Electronics Engineer

Description of duties: Develop and refine the Earth System Research Laboratory's radars, especially in the area of computer and signal processing. Develop software for near real-time processing of radar data to extract rainfall rate and rainfall accumulation. Display this data on the Web in a geo-referenced map display.

Date: 10/94 to 02/98

Employer: University of Colorado, CIRES/NOAA

Position: Professional Research Assistant

Description of duties: CU CIRES employee assigned to NOAA's Environmental Technology Laboratory, Radar Meteorology and Oceanography division. Develop new methods for processing and recording data from research meteorological radars using state-of-the-art computer and DSP techniques.

Date: 6/81 to 10/94

Employer: Codar Technology, Inc., Longmont, Colorado

Position: Vice President of Engineering/Vice President of Research & Development

Description of duties: Directed all engineering and production activities for a start-up company. Also performed electronic and mechanical design in the area of Q-Bus, HF radar, and ruggedized computer products. Supervised development of new products.

Date: 12/71 to 5/81

Employer: National Oceanic and Atmospheric Administration

Position: Electronic Engineer

Description of duties: Served as a design engineer in the development of an X-Band meteorological Doppler radar. Designed the control and data acquisition system for it which was minicomputer based. Wrote all control and data acquisition software. Participated in the development of a microwave FM-CW meteorological Doppler radar.

PATENTS

U.S. Patent 4,943,762, Jul. 24, 1990: Power supply system. W. Carroll Campbell, Michael W. Evans, Edward A. Browning, Jr. and Robert J. Stone.

U.S. Patent 4,985,804, Jan. 15, 1991: Microcomputer housing and ventilation arrangement. W. Carroll Campbell, Michael W. Evans, Edward A. Browning, Jr. and Robert J. Stone.

U.S. Patent 5,437,040, Jul. 25, 1995: Electronic system with variable threshold power failure signaling. William C. Campbell and Barry O. Blair.

REFEREED JOURNAL ARTICLES

Chadwick, R.B., K.P. Moran, R.G. Strauch, G.E. Morrison, and W.C. Campbell, 1976: A new radar for measuring winds, *Bull. Amer. Meteorol. Soc.*, **57**, 1120-1125.

Strauch, R.G., W.C. Campbell, R.B. Chadwick, and K.P. Moran, 1976: Microwave FM-CW Doppler Radar for Boundary Layer Probing, *Geophysical Research Letters*, 3, 193-196.

Chadwick, R.B., K.P. Moran, R.G. Strauch, G.E. Morrison, and W.C. Campbell, 1976: Microwave Wind Measurements in the Clear Air, *Radio Science*, 11, 795-802.

Chadwick, R.B., K.P. Moran, and W.C. Campbell, 1979: Design of a Wind Shear Detection Radar for Airports, *IEEE Trans. Geoscience Electronics*, GE-17, 137-142.

RECENT PUBLICATIONS

Campbell, W.C. and J.S. Gibson, 1997: A Programmable real-time data processing and display system for the NOAA/ETL Doppler radars, Preprint, 28th Radar Meteorology Conf., Amer. Meteorol. Soc., 178-179.

Gibson, J.S., W.C. Campbell and B.E. Martner, 2003: RADS: A radar acquisition and display system for research radars. NOAA Technical Report OAR ETL-69. (Available at <http://www.esrl.noaa.gov/psd/people/Carroll.Campbell/>)

Campbell, W.C., R.J. Hill and D.C. Welsh, 2006: NOAA/K Radar Data from the Rico 2005 Experiment: Description and Visualizations, *NOAA TM OAR PSD-310*. (Available at <http://www.esrl.noaa.gov/psd/people/Carroll.Campbell/>)

Campbell, W.C., J.S. Gibson, R.F. Reinking and T.L. Schneider, 2008: Scientific Basis and Design of a Ground-based Remote Icing Detection System (GRIDS), *NOAA TM OAR PSD-312*. (Available at <http://www.esrl.noaa.gov/psd/people/Carroll.Campbell/>)